

CONFIDENTIAL



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2012/2013**

COURSE NAME : TRANSPORTATION SYSTEM
AND PLANNING

COURSE CODE : BFT 4013 / BFT 40103

PROGRAMME : 4BFF

EXAMINATION DATE : JUNE 2013

DURATION : 3 HOURS

INSTRUCTION : ANSWER **FOUR (4)** QUESTIONS

THIS QUESTION PAPER CONSIST OF **SIX (6)** PAGES

CONFIDENTIAL

- Q1** (a) Describe **FOUR (4)** elements in a transportation system
(8 marks)
- (b) Explain **THREE (3)** positive and negative effects of transportation on land use
(9 marks)
- (c) Explain the steps involved in transportation planning that should be conducted if a monorail network system is proposed between Johor Bahru and Batu Pahat
(8 marks)
- Q2** (a) Explain what transportation planning is
(7 marks)
- (b) The Batu Pahat Town Council proposes to upgrade the transportation system within the areas connecting Ayer Hitam and Batu Pahat in order to improve public transport ridership. Summarize the **SIX (6)** steps of transportation planning before the project can be started.
(18 marks)
- Q3** (a) Explain **FOUR (4)** Intelligent Transportation System (ITS) that can be implemented for traffic and transit management.
(8 marks)
- (b) Based your answer in **Q3(a)**, identify and explain the contribution of each system towards
- (i) The policy goals of safety
 - (ii) Economic efficiency
 - (iii) Environment
- (12 marks)
- (c) The Automated Enforcement System (AES) implemented by the government is an alternative to address the increasing problem of traffic violations. In your opinion, can this technology change Malaysian drivers' attitude towards smarter driving?
(5 marks)

- Q4** (a) Describe what urban integrated transportation system is. (5 marks)
- (b) Figure **Q4** shows the transportation system integration ladder. Explain any **FOUR (4)** steps from the ladder which can potentially be implemented to integrate the city transportation system in Kluang, Johor. (12 marks)
- (c) Recent studies have highlighted three sources of additional economic benefit from transportation system integration:
- (i) Agglomeration benefits,
 - (ii) Imperfect competition benefits and
 - (iii) Income tax benefits.
- Describe any **ONE (1)** of them (8 marks)
- Q5** (a) Explain what mass transit system is and give **THREE (3)** examples of mass transit system types. (5 marks)
- (b) Describe **THREE (3)** examples of transit modes (6 marks)
- (c) Explain about bus transit system, light-rail transit system and rapid rail transit systems. Your answer should cover the transit system characteristics, capabilities, advantage and disadvantage. (14 marks)

- END OF QUESTIONS -

- S1** (a) Huraikan **EMPAT (4)** elemen dalam sistem pengangkutan
(8 markah)
- (b) Terangkan **TIGA (3)** kesan positif dan negatif pengangkutan ke atas penggunaan tanah
(9 markah)
- (c) Terangkan langkah perancangan pengangkutan yang perlu dilaksanakan jika sistem rangkaian monorel dicadangkan di antara Johor Bahru dan Batu Pahat
(8 markah)
- S2** (a) Terangkan apakah sistem pengangkutan
(7 markah)
- (b) Pihak Majlis Perbandaran Batu Pahat bercadang untuk menaik taraf sistem pengangkutan di dalam kawasan yang menghubungkan bandar Ayer Hitam dan Batu Pahat dalam usaha meningkatkan bilangan pengguna pengangkutan awam. Ringkaskan **ENAM (6)** langkah perancangan pengangkutan sebelum projek boleh dimulakan.
(18 markah)
- S3** (a) Terangkan **EMPAT (4)** Sistem Pengangkutan Pintar (ITS) yang dilaksanakan untuk lalulintas dan pengurusan transit.
(8 markah)
- (b) Berdasarkan jawapan anda di **S3(a)**, kenal pasti dan jelaskan sumbangan setiap sistem terhadap
- (i) Matlamat dasar keselamatan
 - (ii) Kecekapan ekonomi
 - (iii) Alam sekitar
- (12 markah)

- (c) Penggunaan Sistem Penguatkuasaan Automatik (AES) disediakan oleh kerajaan sebagai alternatif untuk menangani masalah pelanggaran peraturan lalulintas yang semakin meningkat. Pada pendapat anda, mampukah teknologi ini mengubah sikap pemandu Malaysia ke arah pemanduan bijak?

(5 markah)

- S4 (a) Jelaskan apakah sistem pengangkutan bersepadu bandar

(5 markah)

- (b) Rajah Q4 menunjukkan tangga langkah bagi mengintegrasikan sistem pengangkutan. Terangkan mana-mana **EMPAT (4)** langkah dari tangga tersebut yang berpotensi untuk dilaksanakan bagi mengintegrasikan sistem pengangkutan di bandar Kluang.

(12 markah)

- (c) Kajian terkini telah menekankan tiga sumber manfaat tambahan ekonomi daripada integrasi sistem pengangkutan iaitu :

- i. Faedah aglomerasi
- ii. Faedah persaingan tak sempurna dan
- iii. Faedah pendapatan cukai

Terangkan mana-mana **SATU (1)** daripada manfaat tersebut

(8 markah)

- S5 (a) Terangkan apakah sistem transit massa dan berikan **TIGA (3)** contoh jenis sistem transit massa

(5 markah)

- (b) Jelaskan **TIGA (3)** contoh mod transit

(6 markah)

- (c) Terangkan tentang sistem transit bas, sistem transit keretapi ringan dan sistem transit keretapi laju. Jawapan anda perlu merangkumi ciri-ciri sistem transit, keupayaan, kelebihan dan kelemahan.

(14 markah)

- SOALAN TAMAT -

FINAL EXAMINATION

SEMESTER/SESSION : II/2012/13 PROGRAMME : 4BFF
COURSE : TRANSPORTATION SYSTEM AND PLANNING COURSE CODE : BFT 4013/40103

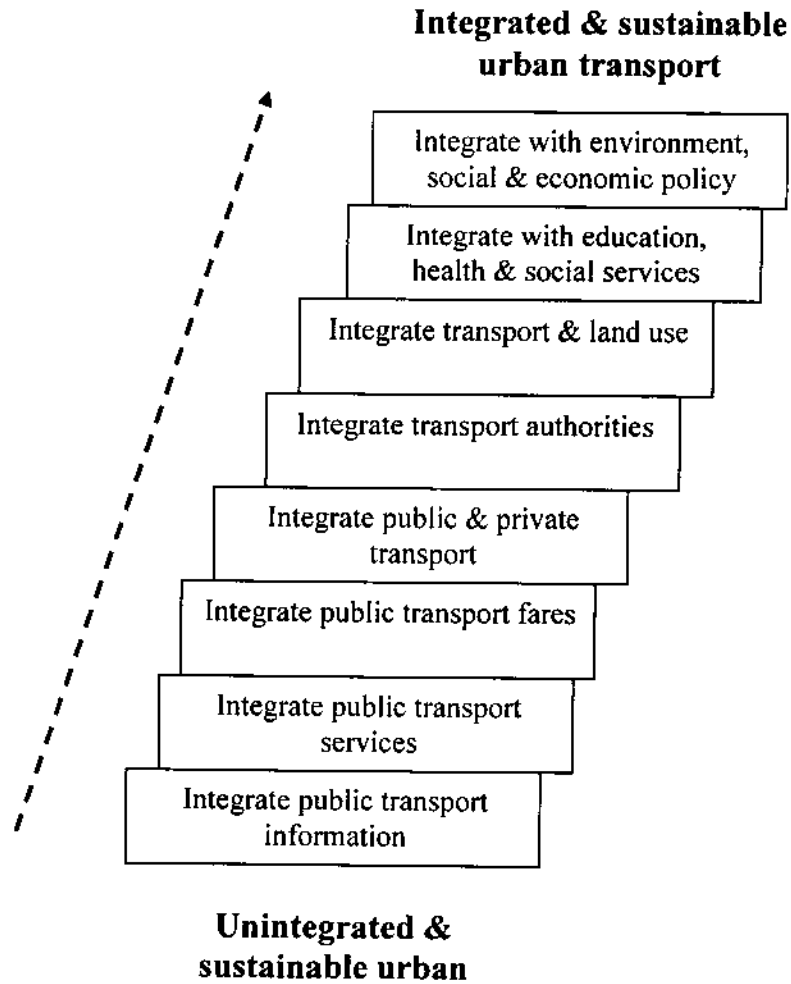


FIGURE Q4 Transportation system integration ladder